

REMARKS

Favorable reconsideration is respectfully requested in view of the following remarks.

I. CLAIM STATUS

Claims 2, 3, 5 and 14-16 are pending in this application and stand rejected.

II. OBVIOUSNESS REJECTION

On pages 2-4 of the Office Action, claims 2-3, 5 and 14-16 were newly rejected under 35 U.S.C. § 103(a) as obvious over Arai (EP 162,302), in view of Harasta et al. (US 4,426,431).

This rejection is respectfully traversed for the same reasons set forth in the previous responses and for the following reasons.

To establish obviousness, three criteria must be met. First, the prior art references must teach or suggest each and every element of the claimed invention. M.P.E.P. § 2143.03. Second, there must be some suggestion or motivation in the references to either modify or combine the reference teachings to arrive at the claimed invention. M.P.E.P. § 2143.01. Third, the prior art must provide a reasonable expectation of success. M.P.E.P. § 2143.02.

A dry measuring test device according to the present invention comprises a single reagent layer comprising (i) a reagent containing a chromogen, (ii) polymer beads containing embedded light reflective particles, and (iii) a matrix comprising a hydrophilic high molecular substance which matrix contains said reagent and said polymer beads, when the content of the polymer beads is 5 to 30 wt% of the total weight of the single reagent layer and the polymer beads have an average diameter of 3 to 15 μ m. See, for instance, independent claim 15.

As repeatedly argued in the previous responses, the primary feature of the present invention is the use of the polymer beads containing embedded light reflective particles. The polymer beads containing embedded light reflective particles as in the claims of the present application is not described nor suggested by any of the cited art references.

EP 162,302 is silent about the polymer beads containing embedded light reflective particles, as discussed in the previous responses filed on April 27, 1999, November 29, 2005 and June 9, 2006.

EP 162,302 discloses an invention related to an integral multilayer analytical element. In EP 162,302, at page 8, line 8 to page 9, line 20, there is a description about an analytical element which has a light-shielding layer in which light-shielding microparticles (hereinafter referred to as "light-shielding particles") are dispersed in a small amount of film-forming hydrophilic polymer binder. From this description, it is clear that the light-shielding particles are dispersed in the form of the particles *per se* in the hydrophilic polymer film. In others, the light-shielding particles of EP 162,302 are not in polymer beads as in the present invention, but instead are directly in the hydrophilic polymer film/reagent layer. Accordingly, contrary to the assertion on page 2 of the Action, EP 162,302 simply does not teach or suggest polymer beads with embedded light reflective particles therein.

Thus, there is no description in EP 162,302 of the reagent layer comprising polymer beads embedding light reflective particles as used in the present invention, nor a suggestion as to the construction of the reagent layer of the dry measuring test device of the present invention.

Furthermore, as acknowledged at the bottom of page 2 of the Action, EP 162,302 is silent with regard to the claimed particle diameters of 3 to 15 μm . In other words, EP 162,302 fails to disclose or suggest a dry measuring test device having polymer beads with an average particle diameter from 3 to 15 μm .

Instead, as noted in the last response, EP 162,302 discloses light reflective particles having a diameter 0.1 to 1.2 microns. However, it is again respectfully submitted that light reflective particles having a diameter 0.1 to 1.2 microns does not suggest polymers beads having an average particle diameter from 3 to 15 μm .

In reply thereto, the Office newly cited Harasta et al. for disclosing beads with a range of bead diameter within that of the claimed invention. However, the combination of Harasta et al.

and EP 162,302 still fails to render obvious the claimed invention, because Harasta et al. do not remedy the above-noted deficiencies of EP 162,302. Specifically, Harasta et al. also fail to disclose or suggest a reagent layer comprising polymer beads embedded with light reflective particles as in the present invention.

Harasta et al. disclose a radiation-curable composition for restorative and/or protective treatment of photographic elements. The invention of Harasta et al. is directed to a technical art which is quite different from the analytical element of the present invention. Therefore, the combination of EP 162,302 with Harasta et al. is unreasonable.

Further, even if the combination is possible, Harasta et al. just teach that the composition may contain particles such as titanium dioxide, zinc oxide, calcium carbonate, barium sulfate, colloidal silica and polymeric beads formed from cross-linked polymers. Harasta et al. are quite silent about the beads made from the composition containing the particles.

Thus, none of the cited references discloses the claimed element of polymer beads containing embedded light reflective particles. Thus, Harasta et al. fails to remedy the deficiencies in EP 302,162, because it too fails to disclose polymer beads containing embedded light reflective particles. For this reason, the combined cited art references cannot render the claimed invention obvious for they fail to disclose or suggest each and every element of the claimed invention.

Further, notwithstanding that the present invention is not obvious over the combination of EP 302,162 and Harasta et al., the use of the polymer beads containing embedded light reflective particles exhibits unexpected results over the art, as discussed in the response filed on December 10, 2002.

In this regard, when the light reflective particles are directly contained in the reagent layer as in the prior art, there is the following problem in practical use as described on page 2, line 25 to page 4, line 1 of the present Specification. Conventionally, in this kind of dry measuring test device for determining a substance to be measured and the reagent, in order to enhance

measurement accuracy, an attempt was made to have the light reflective particles directly contained in the reagent layer and have the reagent for coloring contained therein as well.

However, if a large amount of light reflective particles is contained to improve the measurement accuracy, the reagent layer becomes so dense that a liquid sample can hardly penetrate and develop, and it takes a long time until the amount of the coloring matter generated by the reaction with the reagent becomes sufficiently measurable. Thus, this is a problem in practical use in the art field, prior to the present invention. Further, it is disadvantageous in that the measurement accuracy may possibly be lowered due to dryness if the measuring time is prolonged as described above.

The present invention solved this problem by allowing the light reflective particles to be embedded within independent polymer beads distributed throughout the hydrophilic matrix of the reagent layer. The advantages of embedding light reflective particles in polymer beads are clearly evidenced by Example 1 and Comparative Example 1 in the present Specification, and not believed to disclosed or suggested by the combined cited art references.

Thus, the use of the polymer beads containing embedded light reflective particles and its advantages are not suggested by the cited references.

In addition, the cited art references of EP 302,162 and Harasta et al. lack any motivation for one skilled in the art to embed light reflective particles in polymer beads. In the absence of any such motivation, one skilled in the art could not determine the particular range of polymer beads to be incorporated into the reagent layer and the suitable amount of polymer beads to be incorporated into a reagent layer.

Therefore, the rejection of claims 2, 3, 5 and 14-16 under 35 U.S.C. § 103(a) over EP 162,302 in view of Harasta et al. is untenable and should be withdrawn.

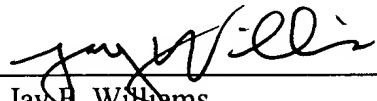
CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is in condition for allowance and early notice to that effect is hereby requested.

If the Examiner has any comments or proposals for expediting prosecution, please contact the undersigned attorney at the telephone number below.

Respectfully submitted,

Yoshihiko HIGUCHI et al.

By: 
Jay D. Williams
Registration No. 48,036
Attorney for Applicants

JFW/akl
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
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